Homework Assignment #4

Note

This assignment is due 2:20PM Thursday, June 9, 2011. Please write or type your answers on A4 (or similar size) paper. You may discuss the problems with others, but copying answers is strictly forbidden.

Problems

1. (60 points)

   (a) Check the satisfiability of $(a \vee b \vee c) \wedge (a \vee \bar{b} \vee \bar{d}) \wedge (b \vee \bar{d}) \wedge (b \vee d) \wedge (\bar{a} \vee \bar{d})$ by the DP algorithm.

   (b) Check again with the DPLL algorithm.

2. (40 points) Illustrate the L^* algorithm by using it to learn the regular language $(a|b)^*ab$. Supply suitable counterexamples wherever needed.